



**Performance Audit
King County Procurement Practices
for Brightwater Professional Design
Engineering Services**

**King County Auditor's Office
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June 28, 2005**

Brightwater Project Background

- Total capital project costs for the Brightwater Project are estimated at \$1.48 billion.
- The Brightwater Project includes a 36-million gallon per day treatment plant; conveyance facilities to carry wastewater to and from the plant; and a marine outfall to discharge treated wastewater.
- The Brightwater treatment facilities will serve 34 local sewer agencies that provide services to 1.3 million residents and businesses in King and south Snohomish counties.

Audit Background and Conclusion

- A 1996 West Point and Renton Wastewater Treatment audit identified unexplained and unwarranted costs.
- Taxpayer and ratepayer interests were not adequately represented.
- County established a centralized project control function to provide oversight of professional design engineering service procurement and contracting processes.
- This audit concludes that strengthened oversight of the county's procurement and contracting processes provides greater assurance that taxpayer and ratepayer interests are represented.

Audit Conclusions (Continued)

- Opportunities exist to further improve the county's current procurement and contracting practices to achieve best value.
- Increased interagency collaboration and external communications could facilitate the resolution of project scheduling and cost issues, and consideration of best practices to achieve effective county procurements.

Audit Scope and Objectives

- Evaluate reasonableness of compensation rates for select design engineering services;
- Determine reasonableness of planned and actual procurement schedules for design engineering services; and
- Research best practices in professional services procurements and identify opportunities for improvement.

Summary of Recommendations

- Assess and adjust compensation rates for engineering services periodically.
- Improve the timeliness of capital project delivery by collaborating on the development of project-specific procurement schedules.
- Establish an interagency task force and advisory group with local engineering firm representation to facilitate collaboration and communication to resolve issues and consider emerging best procurement and contracting practices.

Analysis of Two Brightwater Projects

Our analysis focused on the procurements for two professional engineering services contracts:

- Predesign of the Brightwater conveyance system
- Final design of the Brightwater conveyance system

Design engineering services costs are approximately \$35 million of the total \$818.8 million conveyance system cost.

Initiatives for Cost-Effective Contracts

Since 1996, King County implemented practices to improve the cost-effectiveness of professional services contracts that included:

- Establishing salary cap for principal (high-level) engineers.
- Instituting standard fees for prime consultants and subconsultants.
- Ensuring that indirect costs based on audited rates are consistent with federal guidelines.

Local Engineering Firms' Interests

Local engineering firms expressed interest in improved county procurement and contracting processes, including:

- Increased compensation for professional engineering services.
- More timely procurement, negotiations, and contracting processes.

Compensation Analysis

- The county's approach in determining composite hourly rates (including direct and indirect costs, fees, and profits) were consistent with federal guidelines and industry practices.
- Reduced compensation, profits, and fees resulted in more cost-effective contracts.
- Composite, mid-range rates for direct and indirect costs, fees and profits were at the average for the 11 surveyed public agencies and water utilities.

Mid-Range Compensation Rates

Agency	Mid-Range Estimate	Difference from Average (\$165)
Washington State Dept of Transportation	\$195	\$30
Los Angeles Sanitation	\$188	23
East Bay Municipal Utility District (Oakland)	\$176	11
Sound Transit	\$173	8
Denver Metro	\$173	8
<i>King County</i>	<i>\$165</i>	<i>--</i>
Portland Clean Water Services	\$165	--
City of Portland	\$164	-1
City of San Diego	\$155	-10
City of Dallas	\$150	-15
Seattle Public Utilities	\$148	-17
City of Phoenix	\$133	-32

Scheduling Analysis

The suggested county timeframe for procuring professional engineering services for complex projects was 199 days.

- Actual timeframe was 200 days to procure the conveyance system predesign contract.
- Actual timeframe was 323 days to procure the conveyance system final design contract.
- Factors contributing to contract delays included unique joint venture arrangement, the magnitude of the scope of work, cost analysis issues, and insurance requirements.

Best Practices Analysis

Based on our review of best practices, we determined that opportunities exist for further procurement process improvements.

- Examples include broadening representation of internal and external stakeholders to foster team environment in procuring professional services contracts.
- Utilizing a more broadly represented task force or advisory committee as a forum to resolve recurring issues and consider new best practice initiatives, such as post-project evaluations and performance-based fees.

Executive Response

- Concurred with audit recommendations.
- Provided schedule for implementation of audit recommendations.

Acknowledgement

The King County Auditor's Office acknowledges the:

- Wastewater Treatment Division for time and cooperation during the audit review.
- Procurement and Contract Services Section in the Finance and Business Operations Division for its professional assistance throughout the audit process.